Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2018-03-17-07** **Date: 19-03-18**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub division, BBMP, Bangalore.
Address	:	Shettyhalli Sub division, BBMP, Bangalore.
Project Name	:	Construction of RCC drains at 6th cross in Santosh Nagar and other roads in Ward no.13 Shettyhalli Sub division.
Agency	:	Sri. Nischal .K Lakshman, No.3667, 5th cross, 'B' block, Gayatrinagara, Bengaluru-21
Customer's Reference	:	EE/DD/WO/339/17-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	17-03-18
Sample ID No	:	2018-03-17-07 /01
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	17-03-18
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	2.88	–
2	Finess by Air permeablity method (m^2/kg,Min)	287.6	225m^2/kg, Min
3	Density (gm/cc)	3.12	–
4	Standard Consistency (%)	28.5%	Not specified
5	Initial Setting time	175 minutes	Not less than 30 minutes
6	Final Setting time	280 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1.5mm	Not more than 10 mm

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Note:

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All information furnished by Customer/Representative

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

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Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2018-03-17-07** **Date: 14-04-18**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub division, BBMP, Bangalore.
Address	:	Shettyhalli Sub division, BBMP, Bangalore.
Project Name	:	Construction of RCC drains at 6th cross in Santosh Nagar and other roads in Ward no.13 Shettyhalli Sub division.
Agency	:	Sri. Nischal .K Lakshman, No.3667, 5th cross, 'B' block, Gayatrinagara, Bengaluru-21
Customer's Reference	:	EE/DD/WO/339/17-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	17-03-18
Sample ID No	:	2018-03-17-07 /01
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	17-03-18
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	38.5N/mm^2	Not less than 37 N/mm^2
3	28 Days	54.5N/mm^2	Not less than 53 N/mm^2

AC - 13

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2018-03-17-07** **Date: 20-03-18**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub division, BBMP, Bangalore.
Address	:	Shettyhalli Sub division, BBMP, Bangalore.
Project Name	:	Construction of RCC drains at 6th cross in Santosh Nagar and other roads in Ward no.13 Shettyhalli Sub division.
Agency	:	Sri. Nischal .K Lakshman, No.3667, 5th cross, 'B' block, Gayatrinagara, Bengaluru-21
Customer's Reference	:	EE/DD/WO/339/17-18
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	17-03-18
Sample ID No	:	2018-03-17-07 /02(a)
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	17-03-18

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	268	268	1.8	98.2	90-100
3	20 mm	5259	5527	36.8	63.2	30-70
4	10 mm	4682	10209	68.1	31.9	10-35
5	4.75 mm	4438	14647	97.6	2.4	0-5
6	Pan	353	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2018-03-17-07** **Date: 20-03-18**

Sample ID No : 2018-03-17-07 /02(a)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	**13.2**	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	**12.7**	
3	Specific Gravity	**2.68**	–
4	Bulk Density(Loose) (Kg/l)	**1.53**	–
5	Bulk Density(Compacted) (Kg/l)	**1.56**	–
6	Water Absorption(%)	**0.21**	–

Note:
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ಹಳ್ಳಿ ವಲಯ
ಪಾಲಿಕೆ

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Quality Manager

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Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2018-03-17-07** **Date: 20-03-18**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub division, BBMP, Bangalore.
Address	:	Shettyhalli Sub division, BBMP, Bangalore.
Project Name	:	Construction of RCC drains at 6th cross in Santosh Nagar and other roads in Ward no.13 Shettyhalli Sub division.
Agency	:	Sri. Nischal .K Lakshman, No.3667, 5th cross, 'B' block, Gayatrinagara, Bengaluru-21
Customer Reference	:	EE/DD/WO/339/17-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	17-03-18
Sample ID No	:	2018-03-17-07 /02(b)
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	17-03-18

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	351	351	7.0	93.0	90-100
3	10 mm	2379	2730	54.6	45.4	25-55
4	4.75 mm	1958	4688	93.8	6.2	0-10
5	Pan	312	5000	100	0	–

At-13

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ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2018-03-17-07** **Date: 20-03-18**

Sample ID No : 2018-03-17-07 /02(b)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	**11.5**	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	**12.4**	
3	Specific Gravity	**2.66**	–
4	Bulk Density(Loose) (Kg/l)	**1.52**	–
5	Bulk Density(Compacted) (Kg/l)	**1.58**	–
6	Water Absorption(%)	**0.24**	–
7	Aggregate crushing Value(%)	**23.9**	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	**22.5**	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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ಎಸ್.ಎಂ. ರಸ್ತೆ, ಶ್ರೀವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು.

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Authorized Signature
Quality Manager

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TEST REPORT OF FINE AGGREGATE

Lab ID	:	**CP-2018-03-17-07** **Date: 20-03-18**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub division, BBMP, Bangalore.
Address	:	Shettyhalli Sub division, BBMP, Bangalore.
Project Name	:	Construction of RCC drains at 6th cross in Santosh Nagar and other roads in Ward no.13 Shettyhalli Sub division.
Agency	:	Sri. Nischal .K Lakshman, No.3667, 5th cross, 'B' block, Gayatrinagara, Bengaluru-21
Customer's Reference	:	EE/DD/WO/339/17-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	17-03-18
Sample ID No	:	2018-03-17-07 /03
Sample Type	:	Fine Aggregate
Reference to BIS codes	:	IS 383 : 2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1, 3) RA2012 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
Date of test	:	17-03-18
Total weight taken	:	1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	46	46	4.6	95.4	90-100	90-100	90-100	95-100
3	2.36 mm	131	177	17.7	82.3	60-95	75-100	85-100	95-100
4	1.18 mm	155	332	33.2	66.8	30-70	55-90	75-100	90-100
5	600 micron	182	514	51.4	48.6	15-34	35-59	60-79	80-100
6	300 micron	194	708	70.8	29.2	5-20	8-30	12-40	15-50
7	150 micron	226	934	93.4	6.6	0-10	0-10	0-10	0-15
8	Pan	66	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

AE-13
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ಕಛೇರಿ ಉಪಯೋಗಕ್ಕಾಗಿ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2018-03-17-07** **Date: 20-03-18**

Sample ID No : 2018-03-17-07 /03

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	2.16	_
2	Specific Gravity	2.58	_
3	Material finer than 75 micron(%)	5.4	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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